



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : E05B 73/00		A1	(11) International Publication Number: WO 00/61899 (43) International Publication Date: 19 October 2000 (19.10.00)
<p>(21) International Application Number: PCT/GB00/01302</p> <p>(22) International Filing Date: 10 April 2000 (10.04.00)</p> <p>(30) Priority Data: 9908080.6 9 April 1999 (09.04.99) GB</p> <p>(71)(72) Applicant and Inventor: BROADHEAD, Robert, Malcolm [GB/US]; 14921 North Applegate Road, Grants Pass, OR 97527 (US).</p> <p>(72) Inventor; and</p> <p>(75) Inventor/Applicant (<i>for US only</i>): WHITEHEAD, David, Frank [GB/GB]; Whitehead Precision Engineering Ltd., Units 1 & 2, Spring Gardens Industrial Estate, Romford, Essex RM7 9LD (GB).</p> <p>(74) Agents: GEMMELL, Peter, Alan et al.; Dummett Copp, 25 The Square, Martlesham Heath, Ipswich IP5 3SL (GB).</p>		<p>(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p>	
<p>(54) Title: LOCKABLE CONTAINER</p>			
<p>(57) Abstract</p> <p>A lockable container for an article comprises a frame (2) which has an access opening (4), a closure member (10) which is pivotally mounted in relation to the frame (2), and a latch member (28) which is axially movable within the closure member (10) between a latched position and an unlatched position. The latch member (28) and the frame (2) are each provided with one or more interengageable detents (8, 34) whereby when the closure member (10) is in a closed position and the latch member (28) is in the latched position the detents (8, 34) are engaged and prevent pivoting of the closure member (10). Movement of the latch member (28) to the unlatched position causes the detents to disengage and permit pivoting of the closure member. The closure member (10) is provided with a locking member (22) for engaging the latch member (28) to retain it against axial movement.</p>			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakhstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

LOCKABLE CONTAINER

FIELD OF THE INVENTION

5 The present invention relates to a lockable container, notably a lockable container for displaying pre-recorded storage media such as digital versatile discs (DVDs), video cassettes or compact discs (CDs).

10 BACKGROUND TO THE INVENTION

Pre-recorded storage media such as CDs and video cassettes are usually put up for sale in a plastic case or the like, which carries information about the disc or tape as well as carrying sales promotional material or artwork to attract a purchaser. To prevent theft of the media from a shop various lockable display containers have been proposed which house the disc or tape in its case and prevent a thief gaining access to the disc or tape without breaking the container or removing the container from the shop. The container can be fitted with alarm means so that it cannot be removed from the shop without actuating an alarm. One type of known container employs a spring loaded pin or the like which locates in a recess in a wall of the case, for example as disclosed in EP 0 312 172. Such containers can only be used with cases of a specific size, which have a recess which registers with the pin. Other types of container employ a spring loaded pin to retain a stop member over part of an access opening in the container, displacement of the pin by a magnet permitting the stop member to move out of the way of the access opening by translation or by translation and pivoting, for example as disclosed in EP 0 541 733 and EP 0 666 954.

- 2 -

Most lockable display containers have an access opening which is at least partly open at all times, to permit insertion and removal of the disc or tape in its case. A problem with such containers is that the disc or tape 5 is only protected from damage at the opening by its case, which therefore needs to be tough. For cost reasons, however, it is desirable to make cases from more frangible materials such as cardboard or vacuum-formed plastics materials. Many DVDs, for example, are 10 sold in soft, vacuum-formed plastics cases.

It has been proposed, in WO95/14841, to provide an anti-theft box comprising a cassette with an elongate opening at one face. The cassette has a lid which can 15 be locked to cover the open end of the cassette. To lock the lid on the cassette, a lock mechanism is provided which comprises a lock slide which has lock bolts for engaging in holes in the lid and in a long side wall of the cassette. The lock slide is moved 20 transversely to the long axis of the opening to lock and unlock the lid. The lock slide is moved by an operating slide which slides transversely to the movement of the lock slide, or by an operating pin which is passed from the lower side of the lock slide 25 through a transverse slot in the lock slide and attached to the lock slide.

The present invention seeks to provide an improved lockable container for DVDs and other valuable items.

30

SUMMARY OF THE INVENTION

According to an aspect of the present invention there is provided a lockable container for an article, 35 comprising a frame which has an access opening whereby an article can be inserted into or removed from the

- 3 -

frame, and a closure member which is pivotally mounted in relation to the frame and pivotable between an open position in which an article can be inserted into or removed from the frame through the access opening and a 5 closed position in which the closure member blocks substantially all of the access opening, the closure member housing an elongate latch member which is axially movable within the closure member between a latched position and an unlatched position, the latch 10 member and the frame each being provided with one or more interengageable detents whereby when the closure member is in the closed position and the latch member is in the latched position the detents are engaged and prevent pivoting of the closure member, movement of the 15 latch member to the unlatched position causing the detents to disengage and permit pivoting of the closure member, the closure member being provided with a locking member adapted to move between a locked position at which the locking member engages the latch 20 member so as to retain it against axial movement, and an unlocked position at which the locking member permits axial movement of the latch member.

The latch member may be of unitary construction for 25 simplicity of manufacture. It may be moved to the latched position by pushing with a user's finger.

The frame could be a skeletal frame, but it is preferred that the frame has no openings other than the 30 access opening, so that when the closure member is in the closed position an article contained within the frame cannot be tampered with.

The container of the invention is of particular use for 35 storing and displaying DVDs and other media which are fragile or which have frangible or scratchable cases.

- 4 -

The frame preferably comprises two rectangular or square flat sides and four narrow sides, one of which provides the access opening.

5 The entire locking mechanism may be housed in the closure member, which may have external features to enable the container to be mounted in a display rack. This permits a plurality of containers to be stacked side by side without any part of the locking mechanism 10 projecting sideways or upwards. Alternatively, the closure member could be provided with hanging means, for example a hook, to permit the container to be hung up without projections from the bottom or sides of the container taking up space.

15 The locking member can be a spring biased jaw or clamp which acts to grip the latch member. However it is preferred that the locking member positively engages with the latch member, for example by engaging in a 20 slot or recess so that the latch member is positively secured in position once it reaches the latched position. A leaf spring or a spring-biased magnetic pin may be used. In a preferred embodiment, the locking member is a pin which is spring biased in a 25 bore or recess in a basal wall of the closure member. The exposed head of the pin may locate in a hole in the latch member in a similar manner to the engagement of the pin and sliding rail in EP 0 541 733. The pin may be withdrawn from the latch member by means of a 30 magnet, to permit the latch member to be slid to the unlatched position.

In a preferred embodiment, the latch member is biased to either the latched or the unlatched position by 35 spring means. To facilitate opening of the container, it is preferred that the latch member is biased to the

- 5 -

unlatched position, so that when the locking member is moved to the unlocked position the latch member moves to the unlatched position.

5. When in the latched position, the latch member preferably prevents pivoting of the closure member to the open position by engagement of at least one of the detents with at least one tab on the closure member. This permits the container to be assembled by simply
10. placing the latch member in the closure member. However, the invention is not limited to this embodiment, and other means could be used for preventing pivoting. For example, the closure member may be provided with a pocket or groove in which the
15. latch member is slidably received.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be further described, by way of

20. example, with reference to the following drawing in which:

25. Figure 1 is a perspective view of a lockable container for display of a DVD case in accordance with one aspect of the present invention;

30. Figure 2 is a perspective view of the lockable container of Figure 1 in a locked state;

Figures 3 and 4 are perspective views of the frame of the lockable container of Figure 1;

35. Figures 5 and 6 are perspective views of the closure member of the lockable container of Figure 1;

- 6 -

Figures 7 and 8 are perspective views of the latch member of the container of Figure 1;

5 Figure 9 is an exploded view of the lockable container of Figure 1;

Figure 10 is a perspective view of the container of Figure 9 when assembled, with the closure member in an open position;

10 Figures 11 and 12 are enlarged partial X-ray views of details of the container of Figure 10; and

15 Figure 13 shows a known magnetic device for releasing the locking member in a container in accordance with the present invention.

DETAILED DESCRIPTION

20 The display container comprises a tough, transparent frame 2, for example of polycarbonate, a closure member 10 and a latch member 28.

25 The frame 2 is in this example a generally parallelepipedic box having an elongate access opening 4 along one face. For manufacturing convenience, the frame 2 has two small wedge-shaped apertures at the bottom corners of one face. These apertures are not important or necessary for the functioning of the 30 container, and could be eliminated so that the frame 2 has only a single opening. The frame 2 is dimensioned so that a case 3 for a DVD, shown in broken lines in Figure 1, is a sliding fit within the container.

35 To lock the DVD case 3 in the container, the case 3 is fully inserted into the frame 2 in the direction of the

- 7 -

arrow A. The frame is then pivoted about a hinge in the direction of the arrow B so that its access opening 4 is covered by the closure member 10. Finally, the elongate latch member 28 is pushed axially in the 5 direction of arrow C to lock the closure member 10 to the frame 2 as will be explained below.

The frame 2 has hinge members 6 along one long edge of the access opening 4, and a plurality of generally L-shaped detent members 8 formed along the opposed edge, 10 as best shown in Figure 4. The closure member 10 has hinge members 12 along one long edge, as best shown in Figure 6. The respective hinge members 6, 12 butt together side by side to form a pair of hinge housings 15 having blind tubular bores into each of which is inserted a hinge pin 14. The hinge pin 14 is a close fit for the insides of the hinge members 6, 12 and, once inserted, cannot be removed without breaking the container.

20 The latch member 28 is slidably housed in the closure member 10, retained by tabs 18 on the closure member 10. At one end of the latch member 28 is a blind bore 30 for receiving a spring 26. When the latch member 28 25 is housed in the closure member 10, the spring 26 biases the latch member to the right as shown in Figure 10.

30 The closure member 10 has a blind bore 16 and the latch member 28 has a blind bore 32. A magnetically movable pin 22 sits in the bore 16 on the closure member, biased towards the latch member 28 by a spring 24. If the latch member is pushed to the left as shown in Figure 10, for example by the action of a user's finger 35 on a nub 36 which projects through an aperture 20 in the closure member, the bores 16, 32 move into register

- 8 -

and the pin 22 is urged transversely to locate in the bore 32 in the latch member thereby preventing axial movement of the latch member.

- 5 To protect an article in the frame 2, the closure member 10 is pivoted about the hinge members 6, 12, with the latch member 28 in the unlatched position so that the closure member 10 completely blocks the access opening 4. In this closed position, the tabs 18 on the closure member and the detents 34 on the latch member are disposed in spaces adjacent to the detents 8 on the frame 2. The user pushes the nub 36 until the pin 22 engages in the latch member 28 as described above, thereby locking the latch member and preventing sliding movement of the latch member. In this position, the detents 34 on the latch member 28 engage with the detents 8 on the frame 2, thereby preventing pivoting of the closure member 10 away from the closed position.
- 10
- 15
- 20 To open the container, a known magnetic release device 38 (Figure 13) is used by the sales person. The magnetic release device 38 comprises a base plate 40 having screw holes 42 by which it is secured to a work surface (not shown). The base plate 40 carries a circular magnet 44 having a transverse diametric groove 46 cut in it. When the closure member 10 is inserted into the groove 46 the magnet 44 pulls the locking pin 22 to cause the pin 22 to withdraw fully from the bore 32 in the latch member 28. The spring 26 pushes the latch member 28 to the unlatched position, allowing the container to be opened by pivoting of the closure member to the open position.
- 25
- 30
- 35

The external face of the closure member 10 may be shaped to enable the container to stand up in a rack, or to be hung on a hook.

- 9 -

The invention provides a lockable container for protecting and displaying an article at point of sale, for example a DVD or a video cassette, optionally with 5 packaging material to brace the product inside the container.

All the components of the container, except for the pin 22 and springs 24, 26 can be fabricated from injection 10 moulded plastics materials which may be transparent or translucent. It is also envisaged that, as known per se, the interior of the container would be provided with a magnetic strip or the like which activates an alarm system if the container is removed without proper 15 authorisation.

- 10 -

CLAIMS

1. A lockable container for an article, comprising a frame (2) which has an access opening (4) whereby an article can be inserted into or removed from the frame (2), and a closure member (10) which is pivotally mounted in relation to the frame (2) and pivotable between an open position in which an article can be inserted into or removed from the frame (2) through the access opening (4) and a closed position in which the closure member (10) blocks substantially all of the access opening (4), the closure member (10) housing an elongate latch member (28) which is axially movable within the closure member (10) between a latched position and an unlatched position, the latch member (28) and the frame (2) each being provided with one or more interengageable detents (8, 34) whereby when the closure member (10) is in the closed position and the latch member (28) is in the latched position the detents (8, 34) are engaged and prevent pivoting of the closure member (10), movement of the latch member (28) to the unlatched position causing the detents to disengage and permit pivoting of the closure member, the closure member (10) being provided with a locking member (22) adapted to move between a locked position at which the locking member (22) engages the latch member (28) so as to retain it against axial movement, and an unlocked position at which the locking member (22) permits axial movement of the latch member (28).
30
2. A lockable container as claimed in claim 1, wherein the closure member (10) is provided with at least one tab (18) which is engaged by a detent (34) on the latch member (28) when the latch member (28) is in the latched position so as to prevent pivoting of the closure member (10) to the open position.
35

- 11 -

3. A lockable container as claimed in claim 1 or
claim 2, wherein the locking member is a pin (22)
biased by spring means (24) and movable in response to
5 a magnetic field of suitable magnitude.

4. A lockable container as claimed in any one of the
preceding claims, wherein the latch member (28) is
urged to the unlatched position by spring means (26).

10 5. A lockable container as claimed in any one of the
preceding claims, wherein the latch member (28) is
provided with a region (36) which is accessible to a
user's finger whereby pushing on that region causes the
15 latch member to move axially to the latched position.

20 6. A lockable container as claimed in any one of the
preceding claims, wherein the blocking member (10) is
pivotally connected to the frame (2) by a hinge
comprising at least one hinge housing (6, 12) and at
25 least one hinge pin (14) journalled in a blind bore in
the housing, no part of the hinge pin projecting beyond
the entrance to the housing.

25 7. A lockable container as claimed in claim 1,
wherein the access opening (4) is the only opening to
the inside of the frame (2).

30 8. A lockable container as claimed in any one of the
preceding claims, wherein the latch member (28) is of
unitary construction.

35 9. A lockable container as claimed in any one of the
preceding claims, wherein the said interengageable
detents (8, 34) are L-shaped or hook shaped.

- 12 -

10. A lockable container for an article, comprising a frame (2) which has an access opening (4) whereby an article can be inserted into or removed from the frame (2), and a closure member (10) which is pivotally
5 mounted in relation to the frame (2) and pivotable between an open position in which an article can be inserted into or removed from the frame (2) through the access opening (4) and a closed position in which the closure member (10) blocks substantially all of the
10 access opening (4), the closure member (10) housing a latch member (28) which is axially movable within the closure member (10) between a latched position and an unlatched position, the closure member (10) being provided with a locking member (22) adapted to move
15 between a locked position at which the locking member (22) engages the latch member (28) so as to retain it against axial movement, and an unlocked position at which the locking member (22) permits axial movement of the latch member (28), wherein:
20 the frame (2) is provided with a plurality of detents (8) and the closure member is provided with a plurality of tabs (18) which are disposed adjacent to the said detents (8) when the closure member (10) is in the closed position, and
25 the latch member (28) is provided with a plurality of detents (34) which are disposed between and engage with the detents (8) of the frame (2) and the tabs (18) when the latch member (28) is in the latched position so as to prevent pivoting of the closure member (10) to the
30 open position, the detents (34) on the latch member (28) disengaging from the detents (8) on the frame (2) when the latch member (28) is moved to the unlatched position, thereby permitting the closure member to be pivoted to the open position.

35

11. A lockable container as claimed in claim 10,

- 13 -

wherein the latch member (28) is urged to the unlatched position by spring means (26).

12. A lockable container as claimed in claim 10 or 5 claim 11, wherein the latch member (28) is provided with a region (36) which is accessible to a user's finger whereby pushing on that region causes the latch member to move axially to the latched position.
- 10 13. A lockable container as claimed in any one of claims 10 to 12, wherein the latch member is of unitary construction.
- 15 14. A lockable container as claimed in any one of the preceding claims, wherein the closure member has external features which enable the container to be mounted in a display rack.

1/7

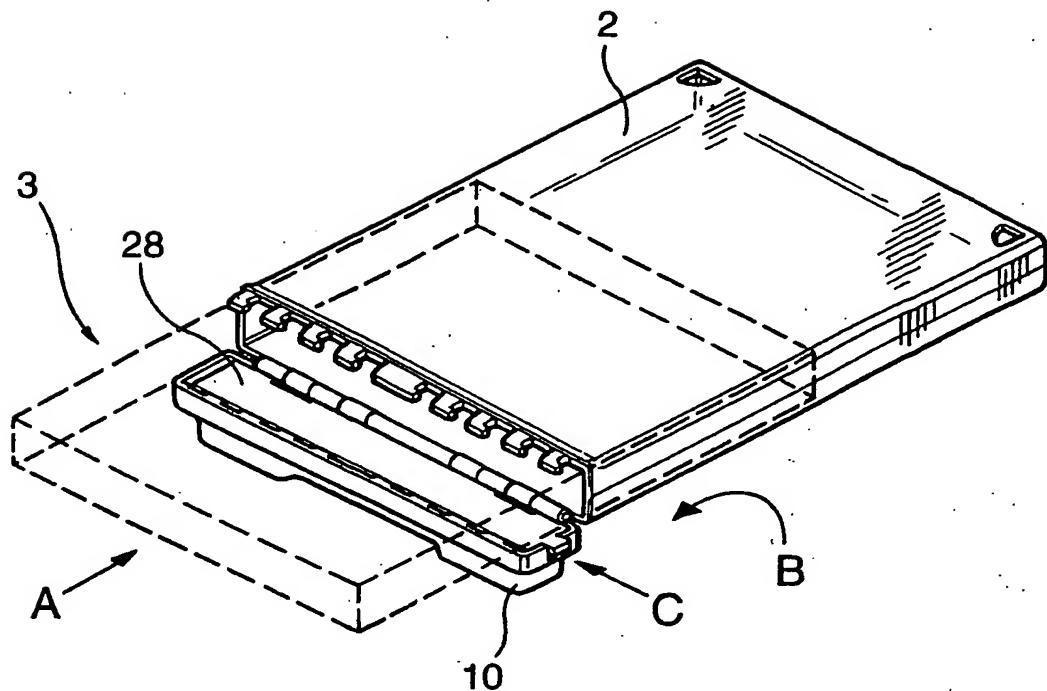


Fig.1

2/7

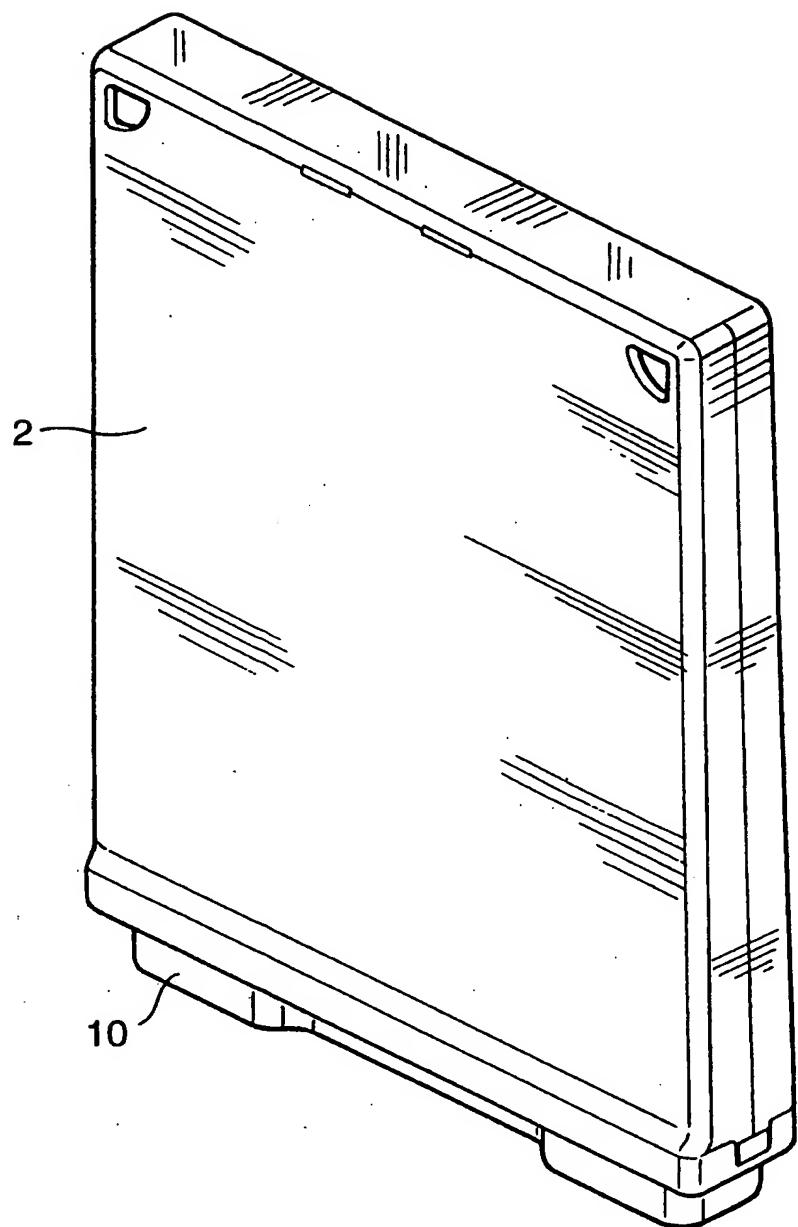


Fig.2

3/7

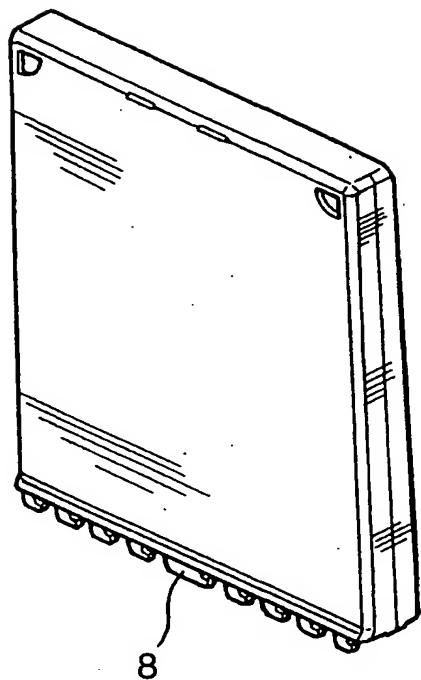


Fig.3

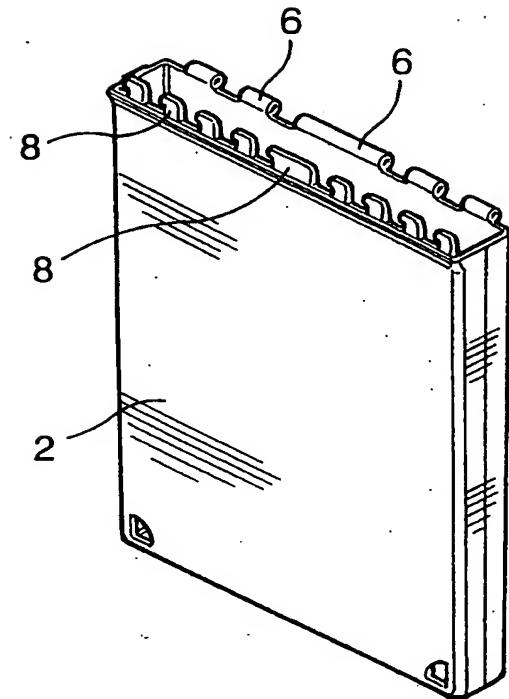


Fig.4

4/7

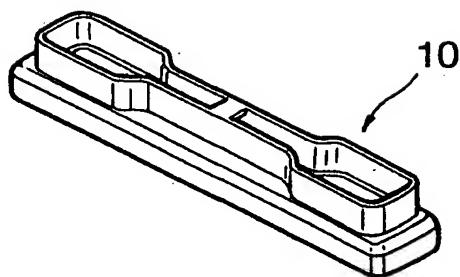


Fig.5

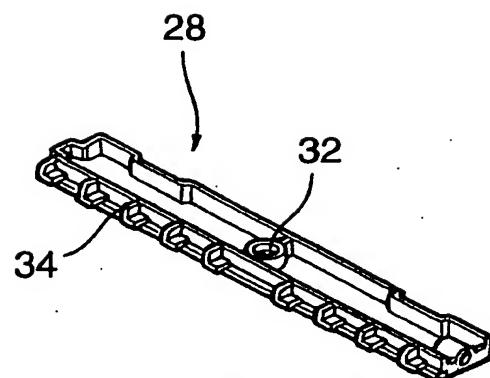


Fig.7

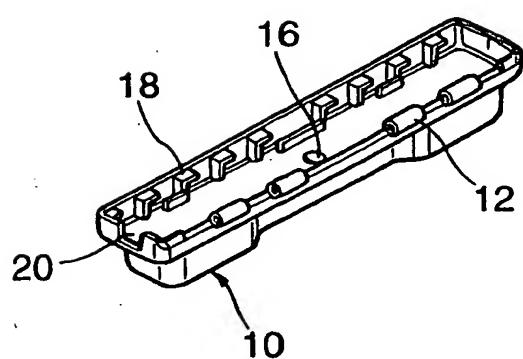


Fig.6

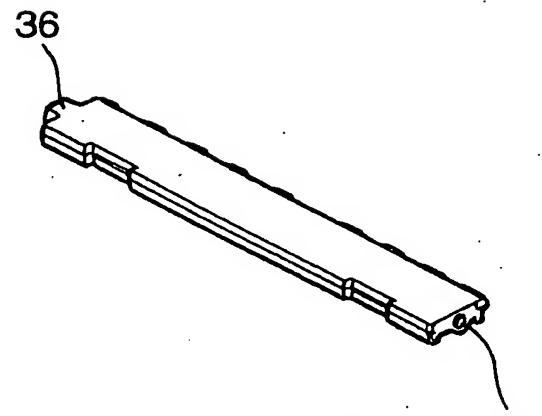
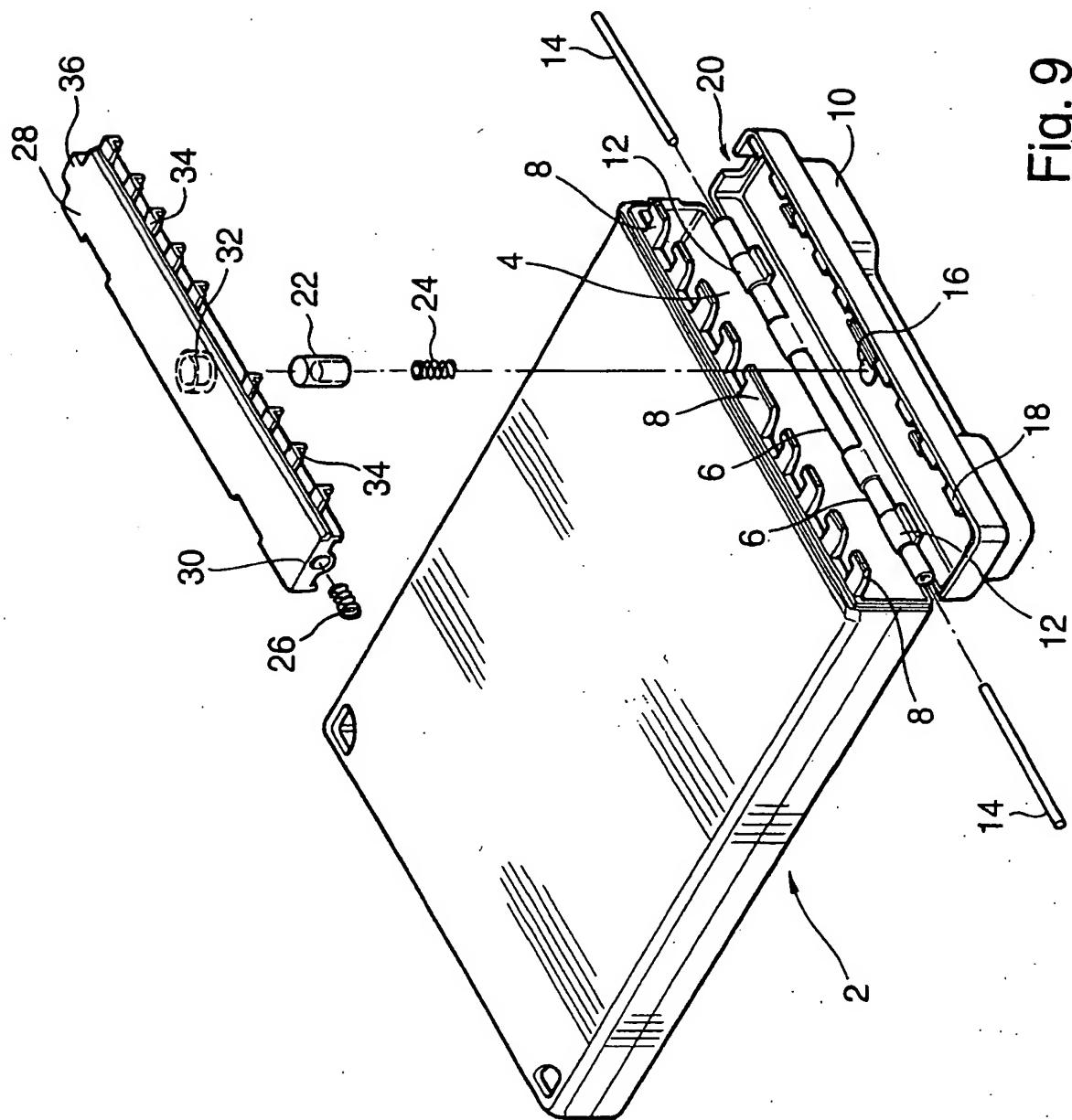
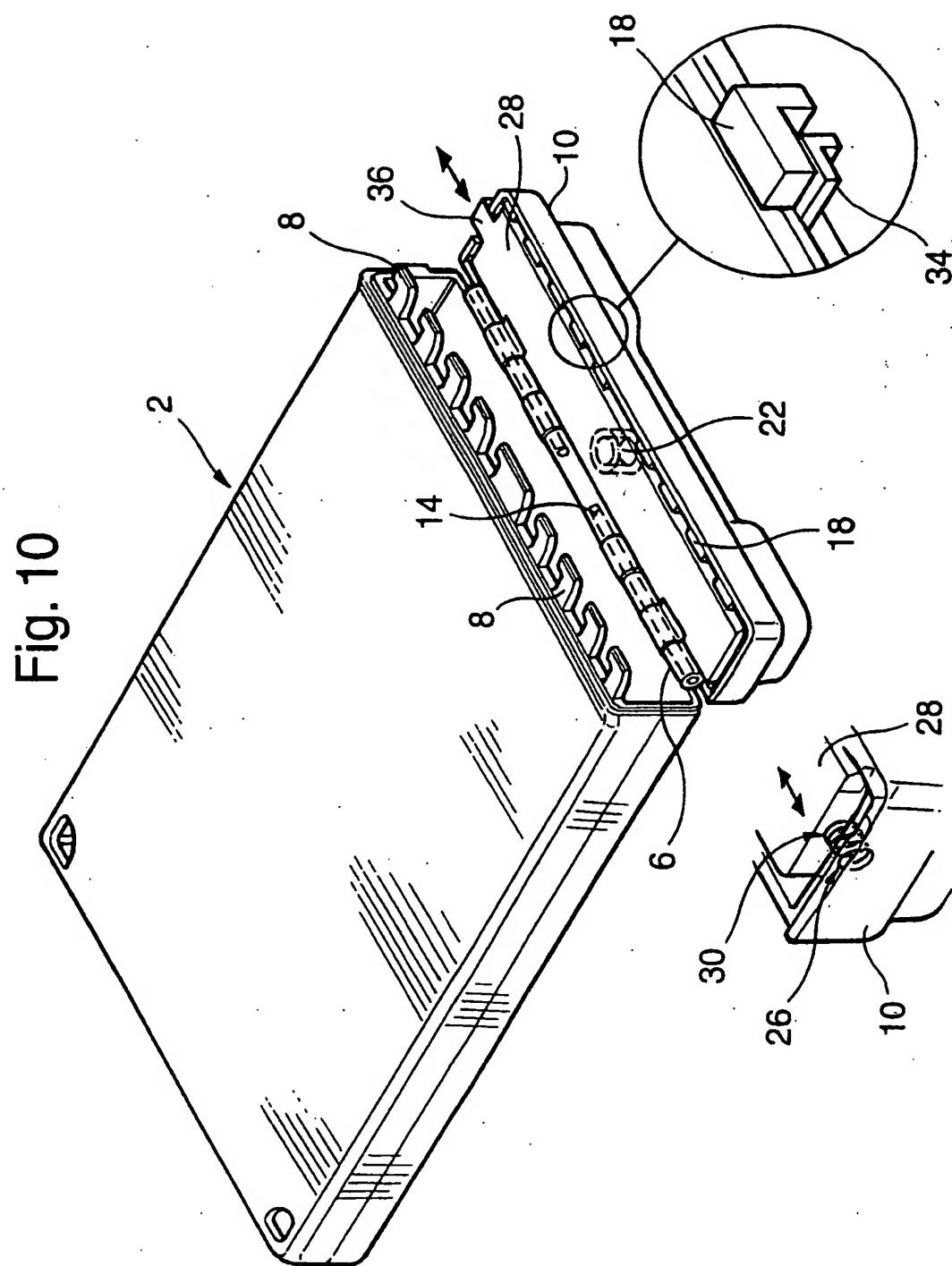


Fig.8

5/7



6/7



7/7

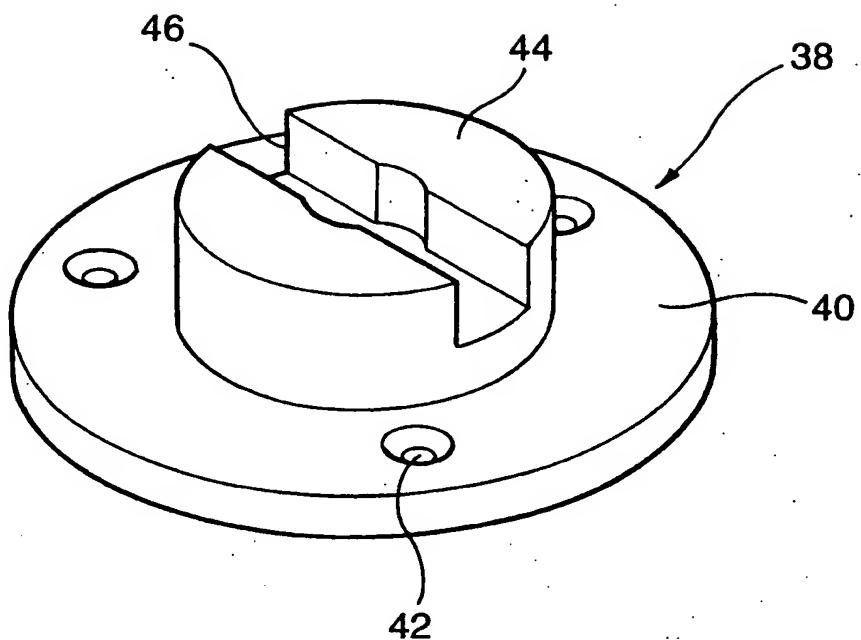


Fig. 13

INTERNATIONAL SEARCH REPORT

Intern. Application No

PCT/GB 00/01302

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E05B73/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 616 103 A (PATACO AG) 21 September 1994 (1994-09-21)	1,5,7-9
Y	column 3, line 30 -column 4, line 40; figures 1-5,20	3,6
A	---	10,12,13
Y	WO 95 14841 A (MW TRADING APS; HOLMGREN, BERTIL) 1 June 1995 (1995-06-01) cited in the application the whole document	3
A	---	1,5-8, 10,12,13
Y	EP 0 640 737 A (PLASTECH IND PTY LTD) 1 March 1995 (1995-03-01)	6
A	page 4, line 14 - line 29; figures 1-3 ---	1,10
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

14 July 2000

Date of mailing of the international search report

24/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3018

Authorized officer

PEREZ MENDEZ, J

INTERNATIONAL SEARCH REPORT

Internat'l Application No
PCT/GB 00/01302

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 628 717 A (MICROTECHNIC SA) 22 September 1989 (1989-09-22) page 5, line 20 -page 6, line 1; figures 1-5 page 4, line 6 - line 11 -----	1, 4, 7, 10, 11
A	WO 97 05354 A (HULSEGGE INTERNATIONAL B.V.) 13 February 1997 (1997-02-13) page 3, line 9 - line 16; figures 1-4 -----	1, 10, 14
A	FR 2 722 028 A (CEDEC SA) 5 January 1996 (1996-01-05) page 4, line 13 - line 30; figures 1-5 -----	1, 10

INTERNATIONAL SEARCH REPORT

Interr. Application No

PCT/GB 00/01302

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
EP 0616103	A 21-09-1994	AT 166691 T DE 59308611 D ES 2116379 T JP 6323052 A		15-06-1998 02-07-1998 16-07-1998 22-11-1994
WO 9514841	A 01-06-1995	SE 506232 C AT 158053 T AU 678661 B AU 1207395 A BR 9408180 A CA 2175570 A DE 69405585 D DE 69405585 T EP 0731870 A ES 2108560 T JP 9506399 T SE 9303945 A US 5760689 A		24-11-1997 15-09-1997 05-06-1997 13-06-1995 27-05-1997 01-06-1995 16-10-1997 26-02-1998 18-09-1996 16-12-1997 24-06-1997 30-05-1995 02-06-1998
EP 0640737	A 01-03-1995	AT 156229 T AU 648490 A AU 676260 B AU 5796494 A BR 9403319 A CA 2125349 A DE 69404577 D DE 69404577 T JP 7309359 A NZ 260203 A US 5657893 A ZA 9406406 A		15-08-1997 21-04-1994 06-03-1997 16-03-1995 11-04-1995 24-02-1995 04-09-1997 05-02-1998 28-11-1995 26-04-1996 19-08-1997 11-05-1995
FR 2628717	A 22-09-1989	NONE		
WO 9705354	A 13-02-1997	NL 1000905 C AU 6534996 A		04-02-1997 26-02-1997
FR 2722028	A 05-01-1996	NONE		

This Page Blank (uspto)